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Sequence Listing was accepted.

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Reviewer: markspencer

Timestamp: [year=2009; month=6; day=12; hr=11; min=44; sec=41; ms=579;]

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Application No: 10533781 Version No: 2.0

Input Set:

Output Set:

Started: 2009-06-08 13:25:20.957
Finished: 2009-06-08 13:25:24.466
Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 509 ms
Total Warnings: 29
Total Errors: 0
No. of SeqIDs Defined: 30
Actual SeqID Count: 30

Error code	Error Description
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W 402	Undefined organism found in <213> in SEQ ID (2)
W 402	Undefined organism found in <213> in SEQ ID (3)
W 402	Undefined organism found in <213> in SEQ ID (4)
W 402	Undefined organism found in <213> in SEQ ID (5)
W 402	Undefined organism found in <213> in SEQ ID (6)
W 402	Undefined organism found in <213> in SEQ ID (7)
W 402	Undefined organism found in <213> in SEQ ID (8)
W 402	Undefined organism found in <213> in SEQ ID (9)
W 402	Undefined organism found in <213> in SEQ ID (10)
W 402	Undefined organism found in <213> in SEQ ID (11)
W 402	Undefined organism found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (13)
W 402	Undefined organism found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

Input Set:

Output Set:

Started: 2009-06-08 13:25:20.957
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Total Warnings: 29
Total Errors: 0
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Actual SeqID Count: 30

Error code	Error Description
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W 213	Artificial or Unknown found in <213> in SEQ ID (23)
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W 213	Artificial or Unknown found in <213> in SEQ ID (25)
W 213	Artificial or Unknown found in <213> in SEQ ID (26)
W 213	Artificial or Unknown found in <213> in SEQ ID (27)
W 213	Artificial or Unknown found in <213> in SEQ ID (28)
W 402	Undefined organism found in <213> in SEQ ID (30)

SEQUENCE LISTING

<110> Barsova, Ekaterina V.
LUKYANOV, SERGEY ANATOLIEVICH

<120> FLUORESCENT PROTEINS FROM COPEPODA
SPECIES AND METHODS FOR USING SAME

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<140> 10533781
<141> 2009-06-08

<150> 60/436,857
<151> 2002-12-26

<150> 60/459,679
<151> 2003-04-02

<150> RU03/00525
<151> 2003-11-26

<160> 30

<170> FastSEQ for Windows Version 4.0

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<212> DNA
<213> Pontellina plumata

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tcaccgacaa gatcatccgg tccaatgcta ccgtggagca cttgcaccca atgggagaca 480
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aaatataaaac agagtacaa aggtctgtc gtcattctaa actttgtatg atttacaaat 780
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atccttggttg ctctgttcat atgaacgcct tctgacttgg accccggctt gaactgaccc 900
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<210> 2
<211> 222
<212> PRT

<213> Pontellina plumata

<400> 2

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20 25 30
Arg Met Thr Asn Lys Met Lys Ser Thr Lys Gly Ala Leu Thr Phe Ser
35 40 45
Pro Tyr Leu Leu Ser His Val Met Gly Tyr Gly Phe Tyr His Phe Gly
50 55 60
Thr Tyr Pro Ser Gly Tyr Glu Asn Pro Phe Leu His Ala Ala Asn Asn
65 70 75 80
Gly Gly Tyr Thr Asn Thr Arg Ile Glu Lys Tyr Glu Asp Gly Gly Val
85 90 95
Leu His Val Ser Phe Ser Tyr Arg Tyr Glu Ala Gly Arg Val Ile Gly
100 105 110
Asp Phe Lys Val Val Gly Thr Gly Phe Pro Glu Asp Ser Val Ile Phe
115 120 125
Thr Asp Lys Ile Ile Arg Ser Asn Ala Thr Val Glu His Leu His Pro
130 135 140
Met Gly Asp Asn Val Leu Val Gly Ser Phe Ala Arg Thr Phe Ser Leu
145 150 155 160
Arg Asp Gly Gly Tyr Tyr Ser Phe Val Val Asp Ser His Met His Phe
165 170 175
Lys Ser Ala Ile His Pro Ser Ile Leu Gln Asn Gly Gly Ser Met Phe
180 185 190
Ala Phe Arg Arg Val Glu Glu Leu His Ser Asn Thr Glu Leu Gly Ile
195 200 205
Val Glu Tyr Gln His Ala Phe Lys Thr Pro Thr Ala Phe Ala
210 215 220

<210> 3

<211> 1010

<212> DNA

<213> Pontellina plumata

<400> 3

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ctcctgagca gggacgtatg accaacaaga tgaagtctac caagggcgcc ttgaccttct 180
ccccctacct tctctctcat gtcatggat acgggttcta ccacttttgtt acctatccca 240
gtgggtatga gaatcccttc ctgcattgcca tcaacaacgg ggggtacacc aacaccagga 300
ttgagaagta tgaggatgga ggagttttc atgttagctt tagctacaga tatgaagcag 360
gcagggttatgat tggggatttc aagggttgtcg ggacaggatt ccctgaggac agtgttatct 420
tcaccgcacaa gatcatccgg tccaatgcta ccgtggagca ctgcacccca atgggagaca 480
acgttcttgtt gggctccccc gcgagaaacct tttccctgag ggatggaggc tactactcat 540
ttgtgggttga cagccacatg cacttcaaga gtgccatcca cccatccatc ctccagaacg 600
ggggggcccat gttgccttc aggagagttt aggaacttca ctccaaacact gaacttggca 660
ttgttagagta tcaacatgcc ttcaagactc ccatacgatt tgcttaaact acaaagtatc 720
aaatattaac agattgacaa aggatatgtc gtcattctaa actttgtatg atttacaaat 780
aatgatttaa tgtcaaccct caaaaataggc ttgaatataat tgaaaaatca actaaacata 840
atccttgggtt ctctgttcat atgaacactt tctgacttgg accccggctt gaactgaccc 900
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<211> 222
<212> PRT
<213> Pontellina plumata

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Val Glu Phe Glu Leu Val Gly Gly Glu Gly Thr Pro Glu Gln Gly
20 25 30
Arg Met Thr Asn Lys Met Lys Ser Thr Lys Gly Ala Leu Thr Phe Ser
35 40 45
Pro Tyr Leu Leu Ser His Val Met Gly Tyr Gly Phe Tyr His Phe Gly
50 55 60
Thr Tyr Pro Ser Gly Tyr Glu Asn Pro Phe Leu His Ala Ile Asn Asn
65 70 75 80
Gly Gly Tyr Thr Asn Thr Arg Ile Glu Lys Tyr Glu Asp Gly Gly Val
85 90 95
Leu His Val Ser Phe Ser Tyr Arg Tyr Glu Ala Gly Arg Val Ile Gly
100 105 110
Asp Phe Lys Val Val Gly Thr Gly Phe Pro Glu Asp Ser Val Ile Phe
115 120 125
Thr Asp Lys Ile Ile Arg Ser Asn Ala Thr Val Glu His Leu His Pro
130 135 140
Met Gly Asp Asn Val Leu Val Gly Ser Phe Ala Arg Thr Phe Ser Leu
145 150 155 160
Arg Asp Gly Gly Tyr Tyr Ser Phe Val Val Asp Ser His Met His Phe
165 170 175
Lys Ser Ala Ile His Pro Ser Ile Leu Gln Asn Gly Gly Pro Met Phe
180 185 190
Ala Phe Arg Arg Val Glu Glu Leu His Ser Asn Thr Glu Leu Gly Ile
195 200 205
Val Glu Tyr Gln His Ala Phe Lys Thr Pro Ile Ala Phe Ala
210 215 220

<210> 5
<211> 814
<212> DNA
<213> Labidocera aestiva

<400> 5
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attggagtggcc gtatctctgg aaccatgaac ggagaggagt tttagcttgtt aggagctggc 120
gatggaaaca ctgatgaagg acgttatgacc aacaagatga agtccaccaa aggacctctc 180
tccttctctc cctacctact ctccccacatc atgggctacg gattctatca ctatgctacc 240
ttccctgctg gatatgagaa tgtctacatc catgctgcta agaatggagg ctacaccaac 300
accaggactg agaggtacga agacggagga atcatttcgg tcaacttcac ctacagatat 360
gaggggaaaca aggttatcg agacttcaag gttgttgat caggattccc agctaacagt 420
gttatcttca ctgacaagat catcaagtcc aacccaacct gtgagcacat ctaccccaag 480
ggagataata ttcttgtcaa tgccctacact cgaacttggc tgctgagaga tggtgat 540
taactctgcac aggtcaacaa tcatctccac ttcaagactg ccatgcatcc caccatgctc 600
cagaacggag gatccatgtt tacctacagg aagggttggagg agctccacag ccagtcagat 660
gttggtattt tagaatatcca acatgtcttc aagacccaa ctgctttgc ctaagctgg 720
aaatatggtt cctatcagac attaataca ataaacttta cttatcattt taaaacccaa 780
ctcttttaat gaataaaatcc ctgttatctac tact 814

<210> 6
<211> 222
<212> PRT
<213> Labidocera aestiva

<400> 6

Met Pro Val Met Lys Ile Glu Cys Arg Ile Ser Gly Thr Met Asn Gly
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Glu Glu Phe Glu Leu Val Gly Ala Gly Asp Gly Asn Thr Asp Glu Gly
20 25 30

Arg Met Thr Asn Lys Met Lys Ser Thr Lys Gly Pro Leu Ser Phe Ser
35 40 45

Pro Tyr Leu Leu Ser His Ile Met Gly Tyr Gly Phe Tyr His Tyr Ala
50 55 60

Thr Phe Pro Ala Gly Tyr Glu Asn Val Tyr Leu His Ala Ala Lys Asn
65 70 75 80

Gly Gly Tyr Thr Asn Thr Arg Thr Glu Arg Tyr Glu Asp Gly Gly Ile
85 90 95

Ile Ser Val Asn Phe Thr Tyr Arg Tyr Glu Gly Asn Lys Val Ile Gly
100 105 110

Asp Phe Lys Val Val Gly Ser Gly Phe Pro Ala Asn Ser Val Ile Phe
115 120 125

Thr Asp Lys Ile Ile Lys Ser Asn Pro Thr Cys Glu His Ile Tyr Pro
130 135 140

Lys Gly Asp Asn Ile Leu Val Asn Ala Tyr Thr Arg Thr Trp Met Leu
145 150 155 160

Arg Asp Gly Gly Tyr Tyr Ser Ala Gln Val Asn Asn His Leu His Phe
165 170 175

Lys Thr Ala Met His Pro Thr Met Leu Gln Asn Gly Gly Ser Met Phe
180 185 190

Thr Tyr Arg Lys Val Glu Glu Leu His Ser Gln Ser Asp Val Gly Ile
195 200 205

Val Glu Tyr Gln His Val Phe Lys Thr Pro Thr Ala Phe Ala
210 215 220

<210> 7
<211> 753
<212> DNA
<213> cf. Pontella meadi Wheeler

<400> 7

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gccacatctc cggaaccatg aatggagagg agtttgaact tattggtgct ggagatggaa 120
atacagatga gggacgcatg accaacaaaa tgaagtccat caaaggacct atctcctct 180
ctccctacct cctctcccac attcttggct acggatatta ccacttgca accttccctg 240
ctggatatga aaatatctac cttcatgcca tgaagaatgg aggttactcc aatgtcagaa 300
ctgagaggtt tgaggatgga ggcatttcattt ctataacctt caactacaga tatgaaggga 360
acaagatcat tggagacttc aagggttgtt gaacaggatt ccctaccaac agtcttatct 420
tcactgacaa gatcattaaa tccaacccta cctgtgagaa catgttcccc aaggctgaca 480
atactcttgtt gaatgcctac accagaacat atttgcttaa agatggtgga tactactctg 540
cccaggttaa caaccatatg cacttcaaga gtgccatcca taccaccatg ctccagaatg 600
gcggatccat gttcacctac agagttgttag aggagacaca cactcagaac gaagttgcta 660
ttgttagagta caaaaatgtc ttcaaaaactc caactgcgtt tgcttgaaat acttgtaata 720
aaactgcaaa gaaataaact aaattgtaca atc 753

<210> 8

<211> 222
<212> PRT
<213> cf. Pontella meadi Wheeler

<400> 8

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				20				25				30			
Arg	Met	Thr	Asn	Lys	Met	Lys	Ser	Ile	Lys	Gly	Pro	Ile	Ser	Phe	Ser
				35				40				45			
Pro	Tyr	Leu	Leu	Ser	His	Ile	Leu	Gly	Tyr	Gly	Tyr	Tyr	His	Phe	Ala
				50			55				60				
Thr	Phe	Pro	Ala	Gly	Tyr	Glu	Asn	Ile	Tyr	Leu	His	Ala	Met	Lys	Asn
				65			70			75			80		
Gly	Gly	Tyr	Ser	Asn	Val	Arg	Thr	Glu	Arg	Tyr	Glu	Asp	Gly	Gly	Ile
				85			90				95				
Ile	Ser	Ile	Thr	Phe	Asn	Tyr	Arg	Tyr	Glu	Gly	Asn	Ile	Ile	Gly	
				100			105				110				
Asp	Phe	Lys	Val	Val	Gly	Thr	Gly	Phe	Pro	Thr	Asn	Ser	Leu	Ile	Phe
				115			120				125				
Thr	Asp	Lys	Ile	Ile	Lys	Ser	Asn	Pro	Thr	Cys	Glu	Asn	Met	Phe	Pro
				130			135				140				
Lys	Ala	Asp	Asn	Thr	Leu	Val	Asn	Ala	Tyr	Thr	Arg	Thr	Tyr	Leu	Leu
				145			150				155			160	
Lys	Asp	Gly	Gly	Tyr	Tyr	Ser	Ala	Gln	Val	Asn	Asn	His	Met	His	Phe
				165			170				175				
Lys	Ser	Ala	Ile	His	Thr	Thr	Met	Leu	Gln	Asn	Gly	Gly	Ser	Met	Phe
				180			185				190				
Thr	Tyr	Arg	Val	Val	Glu	Glu	Thr	His	Thr	Gln	Asn	Glu	Val	Ala	Ile
				195			200				205				
Val	Glu	Tyr	Gln	Asn	Val	Phe	Lys	Thr	Pro	Thr	Ala	Phe	Ala		
				210			215				220				

<210> 9
<211> 880
<212> DNA
<213> cf. Pontella meadi Wheeler

<400> 9

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tcaaatgcc tgacatgaag ctgagtgcc acatctccgg aaccatgaat ggagaggagt 180
ttgaacttat tggctctgga gatggaaata ctgatcaggg acgcatgaca aacaatatga 240
agtccatcaa aggacctctc tccttctctc cctacctact ctccccacatt cttggctatg 300
gatattacca ctttgcAACc ttccctgtct gatatgaaaa tatctacctt catgccatga 360
agaatggagg ttactcaaAT gtcaggactg agaggtatga ggtatggagg atcatttcta 420
taaccttcaa ctacagatAT gaaggcagca agatcattgg agacttcaaA gttattggaa 480
caggattccc taccgacagt cttatctca ctgacaagat cattaaatcc aaccctacct 540
gcgagaacat gttcccaAG gtcgacaaca ttcttgtaA tgcc tacacc acca accttatt 600
tgcttaaAGA tggtggatac tactctgccc aggttaacAA ccatatgcAC ttcaagagtG 660
ccatccatcc tacaatgctc cagaatggtg gatccatgtt cactcacaga gtagtagagg 720
agaaccacac taagaccaAC gtgttatcg tagagtacca aaatgtcttC aaaactccta 780
ctgcatttgc ttAAAAtact tgtaacaaaA ctgcaaagaa ataacctata ttgtacaata 840
gcattttatt aatgcataga AAAATAAATG tatatttt 880

<210> 10
<211> 222
<212> PRT
<213> cf. Pontella meadi Wheeler

<400> 10
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20 25 30
Arg Met Thr Asn Asn Met Lys Ser Ile Lys Gly Pro Leu Ser Phe Ser
35 40 45
Pro Tyr Leu Leu Ser His Ile Leu Gly Tyr Gly Tyr Tyr His Phe Ala
50 55 60
Thr Phe Pro Ala Gly Tyr Glu Asn Ile Tyr Leu His Ala Met Lys Asn
65 70 75 80
Gly Gly Tyr Ser Asn Val Arg Thr Glu Arg Tyr Glu Asp Gly Gly Ile
85 90 95
Ile Ser Ile Thr Phe Asn Tyr Arg Tyr Glu Gly Ser Lys Ile Ile Gly
100 105 110
Asp Phe Lys Val Ile Gly Thr Gly Phe Pro Thr Asp Ser Leu Ile Phe
115 120 125
Thr Asp Lys Ile Ile Lys Ser Asn Pro Thr Cys Glu Asn Met Phe Pro
130 135 140
Lys Ala Asp Asn Ile Leu Val Asn Ala Tyr Thr Arg Thr Tyr Leu Leu
145 150 155 160
Lys Asp Gly Gly Tyr Tyr Ser Ala Gln Val Asn Asn His Met His Phe
165 170 175
Lys Ser Ala Ile His Pro Thr Met Leu Gln Asn Gly Gly Ser Met Phe
180 185 190
Thr His Arg Val Val Glu Glu Asn His Thr Lys Thr Asn Val Ala Ile
195 200 205
Val Glu Tyr Gln Asn Val Phe Lys Thr Pro Thr Ala Phe Ala
210 215 220

<210> 11
<211> 847
<212> DNA
<213> Pontella mediterranea

<400> 11
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atcaagatgc ccaacatgaa gcttgagtgc cgtatctccg gaaccatgaa tggagaggag 120
tttgaacttg ttggtgctgg agaaggaaac actgatgagg gacgcattgac caacaagatg 180
aagtccacca agggacctct ttccctctct ccttatttgc tctcccacgt tcttggttat 240
ggatactacc actatgtac ctccctgtct ggatatgaaa atgtctacct ccatgccatg 300
aagaatggag gttactccaa cacaagaact gagaggatg aggtggagg tatcattct 360
gctacacctca actacagata tgaagggaga cagattcatg gagactcaa ggttgttagga 420
acgggattcc ctgccgacag catcatcttc actgacaaga tcatcaagtc caaccctacc 480
tgtgagcaca tctaccccaa ggctaacaat attcttgta atgcttacac cagaacctgg 540
atgcttagag atggtggtata ctactctgcc caggtcaaca accacatgca tttacagagt 600
gccatttcattc ccaccatgct caagaatggt ggatctatgt tcacccatag aaagggttag 660
gagctccaca cacaactga agtcggtatt gttgaataacc agcatgtctt caagaggcca 720
actgcttttgc ttaattttg taaataaaga aagaatctat aatgcaatag taccttaaag 780
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aaaaaaaaa

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<211> 222
<212> PRT
<213> Pontella mediterranea

<400> 12

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																20
																25
																30
Arg	Met	Thr	Asn	Lys	Met	Lys	Ser	Thr	Lys	Gly	Pro	Leu	Ser	Phe	Ser	
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Pro	Tyr	Leu	Leu	Ser	His	Val	Leu	Gly	Tyr	Gly	Tyr	Tyr	His	Tyr	Ala	
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																55
																60
Thr	Phe	Pro	Ala	Gly	Tyr	Glu	Asn	Val	Tyr	Leu	His	Ala	Met	Lys	Asn	
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																70
																75
																80
Gly	Gly	Tyr	Ser	Asn	Thr	Arg	Thr	Glu	Arg	Tyr	Glu	Asp	Gly	Gly	Ile	
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																90
Ile	Ser	Ala	Thr	Phe	Asn	Tyr	Arg	Tyr	Glu	Gly	Arg	Gln	Ile	His	Gly	
																100
																105
																110
Asp	Phe	Lys	Val	Val	Gly	Thr	Gly	Phe	Pro	Ala	Asp	Se				